**Remarks/Arguments**

Claims 1-14, 19, and 20 were pending in this application. In the October 20, 2008 Office Action, claims 1-14, 19, and 20 were rejected under 35 U.S.C. § 103 as being obvious over U.S. Patent Publication No. 2002/0083419 to Li et al. (hereinafter "*Li*") in view of U.S. Patent No. 5,715,369 to Spoltman et al. (hereinafter "*Spoltman*"), further in view of U.S. Patent No. 6,157,505 to Prockup (hereinafter "*Prockup*").

By this amendment, claims 3-7 have been canceled and new claims 21 and 22 have been added. Claims 1-2, 8-14, 19, and 20 have also been amended. Following entry of this amendment, claims 1-2, 8-14, and 19-22 will be pending in the present application. For the reasons set forth below, the applicant respectfully requests reconsideration and immediate allowance of this application.

Claim Rejections Under 35 U.S.C. § 103

Independent Claims 1 and 19

Independent claims 1 and 19 were rejected under 35 U.S.C. § 103 as being obvious over *Li* in view of *Spoltman*, in further view of *Prockup*. The applicant has amended claims 1 and 19 to further clarify and distinctly point out aspects of the applicant's disclosure. Support for these amendments can be found on page 12, lines 10-17, page 15, lines 6-12, and page 18, lines 1-3, of the present application. No new matter was added by way of these amendments.

The applicant respectfully submits that *Li*, *Spoltman*, and *Prockup*, do not separately or combined teach, suggest, or describe each and every recitation of independent claims 1 and 19, as amended. In particular, the cited art does not teach, suggest, or describe "utilizing a wave table synthesizer of the computer sound card to play a pre-produced digital tone from a [sample] stored in a memory of the computer sound card," as recited in amended claims 1 and 19. Paragraph 0037 of *Li* provides that the sound for testing a sound card is "given off" by a software emulating signal generator based on a provided frequency and amplitude, as seen below in the reproduced portion of *Li*.

> [0037] The noise test of a sound card is carried out as following. A frequency and an amplitude of a signal is first given to the software emulating signal generator. A recording module is executed to record. A sound is given off by the software emulating signal generator. The software emulating signal generator and the recording module are closed.

Similarly, *Spoltman* provides in column 4, lines 17-27, that a speech recognition system is tested by playing a digital audio file located on a storage device of a computer, as seen below in the reproduced portion of *Spoltman*.

> Test application **128** is capable of queuing at least one audio file **140**–**145** and/or **150**–**156** for use as input by speech recognition application **130**, by accessing the appropriate memory device **115** and/or **120** through the operating system **126** facilities and communications bus **118**. Any number of audio files may be stored on memory devices **115** and/or **120** as deemed necessary by the user. Audio files **140**–**145** and **150**–**155** are for illustration purposes and are not intended as a limitation on the minimum or maximum number of available audio files. Each audio file **140**–**145** and **150**–**155** contains at least one audio "phrase" therein.

The applicant submits that playing digital sound data created on a storage device via a software emulating signal generator, as described in *Li*, or playing digital audio files from a storage device on a computer, as described in *Spoltman*, are not equivalent to using a wave table synthesizer of the sound card to playback a digital sample of a pre-produced sound, where the sample is stored in the memory of the sound card, as recited in the applicant's amended claims 1 and 19. Moreover, the Office Action did not rely on *Prockup* to cure the above-identified deficiency of *Li* and *Spoltman*, and the applicant respectfully asserts that *Prockup* does not cure the above-identified deficiency.

Accordingly, because the cited art, either separately or combined in the manner suggested in the Office Action, fails to teach, suggest, or describe each recitation of independent claims 1 and 19, as amended, the applicant submits that amended, independent claims 1 and 19 are in condition for immediate allowance and respectfully requests these rejections be withdrawn.

Dependent Claim 14

Dependent claim 14 was rejected under 35 U.S.C. § 103 as being obvious over *Li* in view of *Spoltman*, in further view of *Prockup*. The applicant has amended claim 14 to further clarify and distinctly point out aspects of the applicant's disclosure. No new matter was added by way of these amendments.

The applicant respectfully submits that *Li, Spoltman*, and *Prockup,* do not separately or combined teach, suggest, or describe each and every recitation of dependent claim 14, as amended. In particular, the cited art does not teach, suggest, or describe "calculating a DC offset value for the second digital format tone" or "comparing the calculated DC offset value to a known acceptable DC offset value," as recited in amended claim 14. The Office Action cites column 7, lines 59-63, reproduced below for the Examiner's convenience, as well as Figures 6A and 6B of *Prockup* as teaching this element.

> FIG. **6** is composed of FIGS. **6**(A) and **6**(B) that respectively indicate the response of clean heads and good tapes and bad tape recording having excessive dropout. FIG. **6** has a Y-axis representative of the FFT data, at a given dBV and at a fundamental frequency of 1000 Hz, collected by the microprocessor **54**. FIG. **6** also has an X-axis given in seconds and representative of data gathering for a predetermined duration of 15 seconds. FIG. **6**(A) shows a plot **124** having a steady baseline **126** having a value approximately 0 dB. Conversely, FIG. **6**(B) shows a plot **128** with a baseline **130** of approximately 0 dB level, but with signals **132** and **134** indicative of data dropouts which characterize the tape being analyzed by the system **10** as having a bad or non-acceptable dropout recording rate.

The cited portions of *Prockup* disclose a graph generated from the Fast Fourier Transform ("FFT") data indicating a signal "dropout" of tape playback at a specific frequency, here 1000 Hz, viewed over a period of time. The applicant respectfully submits that a signal dropout at a specific frequency, as described in *Prockup,* is not equivalent to calculating a DC offset value of a signal or comparing the DC-offset value to an acceptable threshold, as recited in the applicant's claim 14. As defined on page 17, lines 1-3, of the present application, a DC-offset value is associated with a DC bias unintentionally introduced into an analog signal path by signal amplification or other analog signal processing circuitry. As is known in the art, a DC-offset or

DC bias is not associated with any specific frequency in the signal, but is present in the signal across all frequencies. In FFT data, the DC bias may show up as a spike at 0 Hz. The FFT data plotted at 1000 Hz or another frequency over a period of time, however, would not show the DC bias, because the DC bias does not affect the modulation of the signal.

No where does *Prockup* disclose calculating a DC-offset value associated with a DC bias from the FFT data or comparing the DC-offset value to an acceptable threshold, as recited in amended claim 14. Moreover, the Office Action did not rely on *Li* or *Spoltman* to cure the above-identified deficiency of *Prockup*, and the applicant respectfully asserts that neither *Li* nor *Spoltman* cure the above-identified deficiency.

Because the cited art does not teach, suggest, or describe each recitation of this claim, and because this claim depends from allowable independent claim 1, as discussed above, the applicant submits that dependent claim 14 is in condition for immediate allowance and respectfully requests this rejection be withdrawn.

Dependent Claim 20

Dependent claim 20 was rejected under 35 U.S.C. § 103 as being obvious over *Li* in view of *Spoltman*, in further view of *Prockup*. The applicant has amended claim 20 to further clarify and distinctly point out aspects of the applicant's disclosure. No new matter was added by way of these amendments.

The applicant respectfully submits that *Li, Spoltman*, and *Prockup,* do not separately or combined teach, suggest, or describe each and every recitation of dependent claim 20, as amended. In particular, the cited art does not teach, suggest, or describe a "pre-produced digital tone . . . played from a second sample of a second frequency stored in a memory of the computer sound card," as recited in amended claim 20. The Office Action cites paragraph 0032 of *Li,* reproduced below for the Examiner's convenience, as teaching this element.

> **[0032]** The software emulating signal generator of the invention can simulate signals of varied frequency. The operations, generating signal, transmitting signal, changing frequency, of the software emulating signal generator is only accomplished by the programs, thus is simpler than a physical signal generator.

While the reproduced portion of *Li* recites a signal generator simulating varied frequencies, nowhere does *Li* disclose utilizing multiple digital samples of pre-produced sounds at different frequencies stored in the sound card for testing the recording audio channel at varying frequencies, as recited in amended claim 20. Moreover, the Office Action did not rely on *Spoltman* or *Prockup* to cure the above-identified deficiency of *Li*, and the applicant respectfully asserts that neither *Spoltman* nor *Prockup* cures the above-identified deficiency.

Because the cited art does not teach, suggest, or describe each recitation of this claim, and because this claim depends from allowable independent claim 19, as discussed above, the applicant submits that dependent claim 20 is in condition for immediate allowance and respectfully requests this rejection be withdrawn.

Dependent Claims 2 and 8-13

Dependent claims 2 and 8-13 were rejected under 35 U.S.C. § 103 as being obvious over *Li* in view of *Spoltman*, in further view of *Prockup*. The applicant has amended claims 2 and 8-13 to further clarify and distinctly point out aspects of the applicant's disclosure. No new matter was added by way of these amendments. For at least the reasons that these claims depend from allowable independent claim 1, as discussed above, and contain patentable subject matter not shown in the cited references, the applicant submits that dependent claims 2 and 8-13 are in condition for immediate allowance and respectfully requests these rejections be withdrawn.

New Claims

Independent Claim 21

The applicant has added new, independent claim 21. The applicant respectfully submits that *Li, Spoltman*, and *Prockup* do not separately or combined teach, suggest, or describe each and every recitation of new claim 21. In particular, the cited art does not teach, suggest, or describe "a computer sound card comprising a mixer, a recording channel, a wave table synthesizer, and a memory storing a sample of a pre-produced digital tone at a known frequency," as recited in new, independent claim 21. Further, as discussed above in regard to independent claims 1 and 19, the cited art does not suggest or describe "utiliz[ing] the wave table synthesizer to play the pre-produced digital tone from the sample," as further recited in new claim 21. The applicant submits that playing digital sound data created on a storage device via a

software emulating signal generator, as described in *Li,* or playing digital audio files from a storage device on a computer, as described in *Spoltman*, are not equivalent to using a wave table synthesizer of the sound card to playback a digital sample of a pre-produced sound at a known frequency, where the sample is stored in the memory of the sound card, as recited in the applicant's new, independent claim 21. Moreover, the applicant respectfully asserts that *Prockup* does not cure the above-identified deficiency.

Because the cited art, either individually or combined in the manner suggested by the Office Action, fails to teach, suggest, or describe each recitation of this claim, the applicant submits that new, independent claim 21 is in condition for immediate allowance.

Dependent Claim 22

The applicant has added new, dependent claim 22. The applicant respectfully submits that *Li, Spoltman*, and *Prockup,* do not separately or combined teach, suggest, or describe each and every recitation of new claim 22. In particular, as discussed above in regard to claim 14, the cited art does not teach, suggest, or describe "calculat[ing] a DC offset value for the second digital format tone" or "determin[ing] whether the calculated DC offset value is greater than an acceptable DC offset value," as recited in new claim 22. The applicant respectfully submits that a signal dropout at a specific frequency, as described in *Prockup,* is not equivalent to calculating a DC offset value of a signal or comparing the DC-offset value to an acceptable threshold, as recited in the applicant's new, dependent claim 22.

Because the cited art, either individually or combined in the manner suggested by the Office Action, fails to teach, suggest, or describe each recitation of this claim, and because this claim depends from allowable independent claim 21, as discussed above, the applicant submits that new, dependent claim 22 is in condition for immediate.

**Conclusion**

In view of the foregoing amendment and remarks, the applicant respectfully submits that all of the pending claims in the present application are in condition for allowance. Reconsideration and reexamination of the application and allowance of the claims at an early date is solicited. If the Examiner has any questions or comments concerning this matter, the Examiner is invited to contact the applicant's undersigned attorney at the number below.

Respectfully submitted,

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